

CLAIMS

1. A thermosetting water-based resin composition comprising an oil-soluble initiator of which a temperature for one-minute half-life is from 90° to 270°C and a polycondensation resin comprising an unsaturated dicarboxylic acid having a radical-polymerizable unsaturated bond or an acid anhydride thereof as at least one constituent monomer, wherein the polycondensation resin has an acid value of from 3 to 100 mg KOH/g, and wherein said oil-soluble initiator is present in said polycondensation resin.

2. The thermosetting water-based resin composition according to claim 1, wherein the oil-soluble initiator is one or more compounds selected from the group consisting of organic peroxides and azo polymerization initiators.

3. The thermosetting water-based resin composition according to claim 1 or 2, wherein the polycondensation resin is a polyester or a polyester-polyamide.

4. The thermosetting water-based resin composition according to any one of claims 1 to 3, further comprising a compound having two or more radical-polymerizable

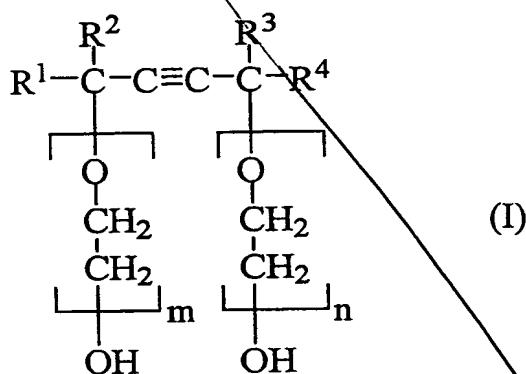
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~~unsaturated bonds.~~

5. The thermosetting water-based resin composition according to claim 4, wherein the compound having two or
5 more radical-polymerizable unsaturated bonds is one or more compounds selected from the group consisting of compounds having (meth)acryl groups at both ends, compounds having allyl group, and compounds having divinyl group.

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~~A₃~~ 6. The thermosetting water-based resin composition according to any one of claims 1 to 5, further comprising an acetylene glycol compound represented by the formula (I):



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wherein each of R¹ to R⁴ is independently a linear alkyl group having 1 to 6 carbon atoms and a branched alkyl group having 3 to 6 carbon atoms; and each of m and n is

an integer of 0 or more.

7. The thermosetting water-based resin composition according to any one of claims 1 to 6, further comprising
5 a wax.

8. The thermosetting water-based resin composition according to any one of claims 1 to 7, wherein the polycondensation resin has a saponification value of from
10 150 to 750 mg KOH/g.

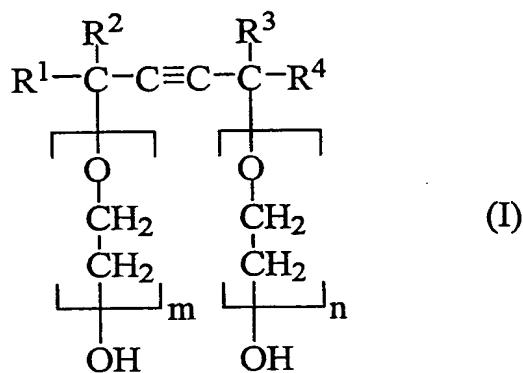
9. A process for preparing a thermosetting water-based resin composition, the process comprising removing an organic solvent by distillation from a raw material
15 composition comprising a polycondensation resin comprising an unsaturated dicarboxylic acid having a radical-polymerizable unsaturated bond or an acid anhydride thereof as at least one constituent monomer, wherein the polycondensation resin has an acid value of from 3 to
20 100 mg KOH/g; an oil-soluble initiator of which a temperature for one-minute half-life is from 90° to 270°C; the organic solvent; a neutralizing agent; and water, to give the thermosetting water-based resin composition comprising the polycondensation resin and the oil-soluble initiator, wherein said oil-soluble initiator is present
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in said polycondensation resin.

10. The process according to claim 9, wherein the raw material composition further comprises a compound having two or more radical-polymerizable unsaturated bonds.

11. The process according to claim 9 or 10, wherein the raw material composition further comprises an acetylene glycol compound represented by the formula (I):



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wherein each of R¹ to R⁴ is independently a linear alkyl group having 1 to 6 carbon atoms and a branched alkyl group having 3 to 6 carbon atoms; and each of m and n is an integer of 0 or more.

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12. The process according to any one of claims 9 to 11, wherein the polycondensation resin has a saponification value of from 150 to 750 mg KOH/g.

13. A molding compound composition comprising the water-based resin composition of any one of claims 1 to 8.

5 14. A molding product prepared by molding the molding compound composition of claim 13.